

REMARKS

Applicants respectfully request reconsideration and allowance in view of the foregoing amendments and the following remarks. By this Amendment, claims 1 and 14 have been amended and claim 20 has been added. Upon entry of the Amendment, claims 1-20 will be pending in the Application. Claims 8-13 are allowed. Applicants thank the Examiner for acknowledging the allowable matter of claims 8-13.

In the Office Action, claims 1-7 stand rejected under 35 U.S.C. § 103(a), as being unpatentable over U.S. Patent No. 4,941,082 to Pailthorp et al. ("Pailthorp") in view of U.S. Patent No. 6,699,627 to Smith et al. ("Smith"). Claims 14-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith and Pailthorp and further in view of U.S. Patent No. 4,760,385, to Jansson et. al ("Jansson").

As indicated previously on the record, aspects of the present invention are generally related to calibrating an imaging system to correct possible panel misalignment errors. In accordance with some embodiments, a reference slide or data point may be used to obtain a series of measurements which may be compared to expected results. Alignment calibration data collected or otherwise determined in accordance with the present application may be used to determine positioning and orthogonality errors in the scanning system. Specifically with respect to employing calibration data to correct alignment errors associated with panels, amended claim 1 for example recites, *inter alia* elements directed to obtaining a sequence of images, collecting calibration data from the sequence of images and determining positioning and orthogonality errors from the calibration data." As set forth in more detail below, at least the foregoing elements are neither disclosed nor suggested by the references cited.

Rejections of Claims 1-7 under 35 U.S.C. § 103

Applicant respectfully submits that the rejections of claims 1-7 are rendered moot in view of the amendments to independent claim 1. Pailthorp is directed to a light beam positioning system for calibrating galvanometer laser beam positioners (Pailthorp, col. 4, lines 42-51). Specifically, Pailthorp accommodates long-term drift in positioning systems by periodic calibration using 13 predetermined points (Pailthorp, col. 5, lines 12-35 and 55-62). Further, Pailthorp teaches calibration using specific points to generate correction coefficients for use in a mathematical formula (col. 5, lines 12-19). Amended claim 1 includes the requirements of obtaining a sequence of images and collecting calibration data from the

sequence of images. Pailthorp does not teach obtaining a sequence of images, or collecting calibration data from the sequence of images as recited in amended claim 1.

Furthermore, the Office Action acknowledges that Pailthorp does not teach creating a solution model and relies on Smith to cure the deficiency. Smith is directed to a system that creates a physically etched semiconductor wafer as a permanent record of an alignment attribute exposure pattern (Smith Abstract). Smith does not teach creating a solution model but, as cited, merely suggests that calibrated reference wafers could be used for “improved lithographic simulation using conventional optical modeling software” (Smith, col. 4, lines 22-27). Thus, Smith does not teach a solution model based on positioning and orthogonality data. Nevertheless, Applicants have amended claim 1 to explicitly require a solution model for adjusting the imaging system. Smith does not teach the required imaging system and does not teach or suggest obtaining a sequence of images as required in amended claim 1.

For at least these reasons, Applicants submit that the rejections of claims 1-7 are moot. Applicants have added claim 20 which depends from claim 1. Claim 20 adds the further limitation that the sequence of images is captured by a camera. The use of a camera is fully supported throughout the Specification including at paragraph 32. Neither Pailthorp nor Smith teach the use of a camera.

Rejections of Claims 14-19 under 35 U.S.C. § 103

Applicant respectfully submits that the rejections of claims 14-19 are rendered moot in view of the amendment to independent claim 14. In the Office Action, Smith is cited as teaching a staging element which moves relative to a camera. Applicants disagree. As cited, Smith does not teach a camera or a staging area and nowhere teaches the relative movement of a staging area. Applicants note that Smith teaches a photolithographic exposure tool and respectfully submit that such tool would not be understood in the art to be a camera (Smith, col. 4, lines 1-4). Nevertheless, in the interest of furthering prosecution, Applicants have amended claim 14 to require that the camera be operative to detect images (*see*, Specification of present Application at paragraph 23). Smith cannot be said to teach the presently claimed camera that is required to detect images. Thus, at least this distinction between the present Application and Smith is explicitly recited in amended claim 14.

Therefore, for at least these reasons, Applicants respectfully submit that the rejections of claims 14-19 are rendered moot by the amendment of claim 14 and that claims 14-19 are patentable over the art of record.


CONCLUSION

Based at least upon the foregoing, Applicants respectfully submit that claims 1-20 are allowable, and that the present application is currently in condition for allowance. The Examiner is encouraged to contact the undersigned at 858-509-4007 if it is believed that a discussion may advance the prosecution of this case.

Please charge any fees associated with the submission of this paper to Deposit Account Number 033975. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Respectfully submitted,

PILLSBURY WINTHROP SHAW PITTMAN LLP



ANTHONY G. SMYTH

Reg. No. 55,636

Tel. No. 858 509.4007

Fax No. 858 509.4010

Date: November 17, 2005
11682 El Camino Real
Suite 200
San Diego, CA 92130-2092
(619) 234-5000

CERTIFICATION UNDER 37 C.F.R. §§ 1.8 and/or 1.10*

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